

Estimation Procedures for Standard (Non-Interval) Meters
PSWG Report to the Utilities Director of the Arizona Corporation Commission
July 2004, Version 4

Introduction

When electric utilities cannot obtain a valid meter read to bill their retail customers, various methods are employed to estimate customers' electric usage. The utilities participating in the Process Standardization Work Group (PSWG) have held six (UPDATE) workshops in 2004 to compare and evaluate the estimation methods each utility employs for the various situations where customers are billed without actual meter reads (see attachments for the tabular summary of Estimation Situations and Estimation Procedures). When a read is not available at the time the customer's billing cycle is processed for billing by the Customer Information System (CIS), each utility's CIS will automatically estimate usage for the majority of missing reads. For all others, we manually have to estimate missing read. The customer's usage is evaluated and manually estimated. Although different methodologies are used by the Arizona utilities to estimate usage, the PSWG has concluded that in all cases certain principles common to all the utilities are used for system and manual estimations.

General Estimation Principles

1. The utilities comply with the A.C.C. 210 (A) (2) that requires utilities to consider (a) the customer's usage during the same month of the previous year, and (b) the amount of usage during the preceding month.
2. Whenever feasible, the utilities attempt to get actual reads rather than estimating the customer's usage.
3. The vast majority of estimated bills are based on actual historical usage for the current customer or previous customer at the same premise.
4. The utilities always estimate on the conservative side (that is, initial usage estimates are biased downward).
5. When there is evidence of tampering, more rigorous methods of investigation and estimation are used.
6. When customers provide explanations why an estimated bill is probably overstated (for example, the customer was on vacation), the utilities rely on this information and adjust estimates accordingly.
7. Utilities investigate individual customer circumstances when appropriate prior to issuing an estimated bill.
8. Whenever indicated, estimated bills are adjusted when the next actual read is obtained.

Summary of PSWG Evaluation of Estimation Methods

The attached tables, "Estimation Situations and Customer Notifications" and "Estimation Procedures," provide the details of the situations where Arizona electric utilities render bills without meter reads and methodologies used to estimate meter reads in the absence of actual reads. These situations and methodologies are:

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Estimation Situations and Customer Notifications

1. Situations that require bill estimation:
 - 1.1. Unable to access the meter to obtain a read.
 - 1.2. Meter has failed.
 - 1.3. Valid read cannot be processed by CIS when customer's read cycle billed.
2. Situations which are rendered as normal:
 - 2.1. Bills are prorated at general rate change.
 - 2.2. Tariff calls for estimation of usage (for example, unmetered services, streetlights).
 - 2.3. Direct Access customers are billed using a class load profile pursuant to PSWG VEE Rules and Procedures.
 - 2.4. The bill is rendered with actual end read, but an estimated start read.

Estimation Procedures

1. Estimation Methodologies for Energy-Only Rates:
 - 1.1. When there is account history:
 - 1.1.1. Estimate is derived from previous month's usage.
 - 1.1.2. Estimate is derived from the usage for same month from previous year.
 - 1.1.3. Estimate is derived from the average usage for the same season.
 - 1.2. When there is no account history:
 - 1.2.1. Estimate is based on "rule-of-thumb" methods, or
 - 1.2.2. Bill as zero usage.
 - 1.2.3. First bill may be adjusted at next valid read.
2. Estimation Methodologies for Demand Rates:
 - 2.1. Class average load factor is applied to estimated usage.
 - 2.2. Individual historical demands are used for missing read.
3. Estimation Methodologies for TOU Rates:
 - 3.1. Class average load factor is applied to estimated usage.
 - 3.2. Individual historical demands are used for missing read.

Definitions:

Segment Profile: